

## **MONTANA FISH, WILDLIFE & PARKS FINAL PROJECT PERFORMANCE REPORT**

**STATE:** MONTANA  
**AGREEMENT:** T-8-1  
**GRANT TITLE:** Montana Coordinated Bird Monitoring  
**PERIOD COVERED:** June 1, 2003 through December 31, 2004

### **Objective**

The objective of this grant is to provide data for one component of the “Montana Integrated Avian Monitoring Plan”, including baseline and long-term trend data, basic habitat associations, and targeted habitat relationships.

### **Location**

The landbird transect were located throughout Montana, although most were concentrated in the northeastern third of the state (all counties north of the Yellowstone River and east of the Continental Divide). Additional transects were established in Beaverhead, Carbon, Madison, and Powell counties.

### **Accomplishments**

- Surveyed birds on 55 point count transects in northeastern Montana and other areas.
- Conducted pilot work and subsequent planning for river riparian surveys to be implemented in 2005 (*Attachment 1*).
- Completed draft of Montana Coordinated Bird Monitoring plan for review by partners (*Attachment 2*).
- Continued development of a web-based interface to make data resulting from implementation of the Coordinated Bird Monitoring Plan available to managers, biologists and the public (*Attachment 2*).
- With funding from PPL Montana, we continued to conduct bird surveys in riparian areas along the Madison and Missouri Rivers. A report on this 2-year project is attached (*Attachment 3*). Part of this overall effort (the point counts conducted in 2004) was used as match for this contract.
- In-kind match from Plum Creek Timber consisted of Goshawk, heron, woodpecker, and breeding bird surveys (BBS), as their contributions to the Montana Coordinated Bird Monitoring Plan.

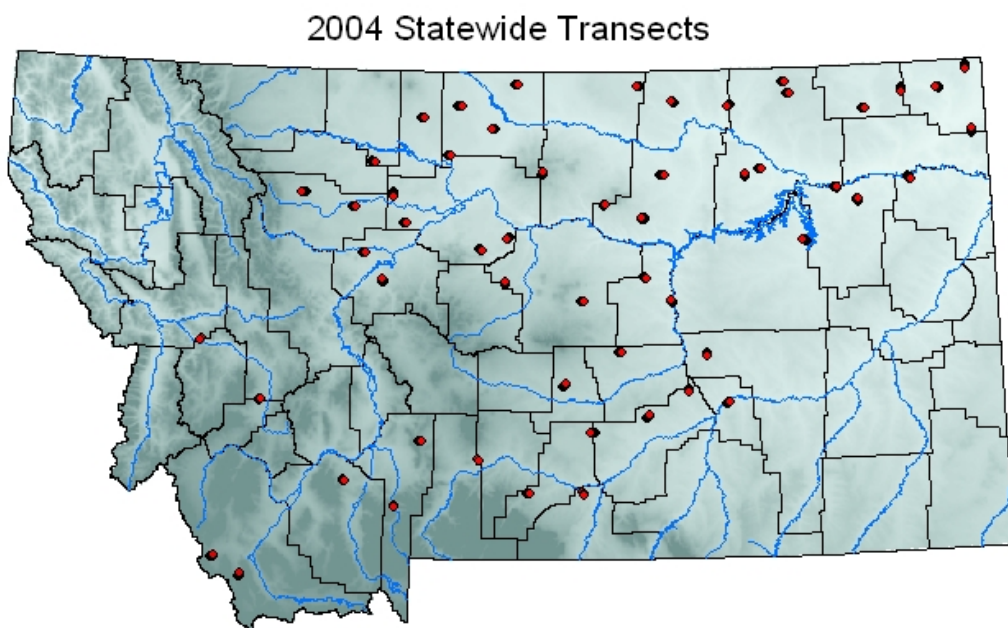
### **Discussion**

The Avian Science Center (ASC) at the University of Montana took the lead in developing a Coordinated Bird Monitoring Plan for Montana. ASC is reaching the end of a decade-long effort to develop a truly comprehensive partner-based statewide bird monitoring program, implementing the elements of this plan, and coordinating a partnership that includes a wide variety of relevant agencies.

ASC entered into a 3-year agreement with Montana Fish, Wildlife and Parks to work on making such a program a reality with the help of State Wildlife Grant (SWG) program funds.

ASC continues to implement bird survey work in northeastern Montana and other areas with non-federal lands. The goal is to eventually locate at least one transect in every quarter latilong that does not have a BBS route, which will help stratify the overall monitoring effort geographically, complement the BBS (and other point count efforts), and provide latilong atlas data.

In 2004, ASC hired, trained, and supervised two experienced bird-survey technicians to conduct bird surveys on the transects that were set up in 2003, and to establish new transects as necessary. The technicians surveyed 55 transects throughout Montana in 2004 (see Figure; list of transects is on following page). ASC just missed the goal of surveying 60 transects because of a very wet first couple of weeks at the beginning of the field season, which limited access to many of the gumbo roads in northeastern Montana. Some sites were dropped because it was thought that access problems would continue in the future. New transect sites were established to replace these.



Field work did not continue following the bird surveying season. Additional transect sites still need to be established in east-central Montana. Although ASC has selected random points for these additional transects, they have decided not to visit these potential sites until the latter part of the summer. Because of the large distances that need to be traveled between sites, ASC felt that it was a more efficient use of resources to visit and set up these new transects when the birds could be surveyed at the same time.

# Locations of all 55 transects surveyed in 2004

Year	Transect#	Quad Name	GPS lat	GPS long	Obs	Date
2004	444811300	MEDICINE LODGE PEAK	44.80888	-113.0093	TSB	703
2004	445711320	EVERSON CREEK	44.96043	-113.3424	TSB	702
2004	452611113	GARNET MOUNTAIN	45.43679	-111.2314	KRS	616
2004	453210940	COWFACE HILL	45.54560	-109.6831	KRS	614
2004	453310901	RAPIDS	45.55145	-109.0314	KRS	613
2004	453811150	HARRISON	45.63412	-111.8480	KRS	611
2004	454911016	HUNTERS HOT SPRINGS	45.82518	-110.2772	KRS	612
2004	455811057	SACAGAWEA PEAK	45.96727	-110.9623	KRS	615
2004	460110852	BROADVIEW WEST	46.03211	-108.8838	KRS	602
2004	460910816	DUNN MOUNTAIN SOUTH	46.15555	-108.2705	KRS	603
2004	461510719	MYERS	46.25409	-107.3205	KRS	605
2004	461511250	RACETRACK	46.25218	-112.8495	KRS	601
2004	462310745	WEED CREEK	46.39028	-107.7565	KRS	604
2004	462510915	WALLUM	46.41666	-109.2549	KRS	607
2004	464110732	HECKER RANCH	46.68426	-107.5463	KRS	606
2004	464110836	LAKE MASON NE	46.69867	-108.6052	KRS	521
2004	464511334	MINERAL RIDGE	46.75253	-113.5790	KRS	531
2004	470510756	FAIL RANCH	47.09688	-107.9454	EEF	521
2004	470610902	HORSETHIEF COULEE	47.11360	-109.0483	EEF	614
2004	471410957	BIG SPRING	47.24331	-109.9578	EEF	613
2004	471511125	TRULY	47.26216	-111.4261	EEF	605
2004	471810817	BROWN SPRING	47.30708	-108.2883	KRS	707
2004	472911141	FAIR HAVEN COLONY	47.49515	-111.6872	EEF	531
2004	473211016	GERALDINE	47.53971	-110.2818	EEF	616
2004	473410618	SHORT CREEK	47.57607	-106.3020	KRS	522
2004	473810954	LAST CHANCE BENCH	47.64125	-109.9024	EEF	615
2004	474511111	ANTELOPE FLAT	47.75601	-111.1972	EEF	529
2004	474710814	DRY FORK RIDGE	47.79006	-108.2499	KRS	629
2004	475210539	DAILEY SRPING	47.87235	-105.6610	KRS	628
2004	475211148	COLLINS SE	47.86808	-111.8123	EEF	702
2004	475310845	CRAZYMAN COULEE	47.89479	-108.7599	EEF	621
2004	475910556	TURTLE CREEK	47.99906	-105.9435	EEF	522
2004	475911119	SHANNON BRIDGE	47.99897	-111.3224	EEF	528
2004	475911223	BYNUM RESERVOIR	47.98648	-112.3944	EEF	703
2004	480410458	MORTARSTONE BLUFF	48.06261	-105.0306	KRS	623
2004	480610702	BURNETT FLATS EAST	48.10694	-107.0340	EEF	622
2004	480810803	WEST ALKALI RESERVOIR	48.14667	-108.0666	KRS	621
2004	480910930	BIG JOHN BUTTE	48.15398	-109.5075	EEF	619
2004	481010652	ENGSTROM RANCH	48.17610	-106.8693	KRS	622
2004	481411135	FOWLER COULEE NE	48.24837	-111.6007	EEF	617
2004	481811040	ROCKY COULEE SW	48.30649	-110.6683	EEF	608
2004	482310412	SUNNYHILL SCHOOL	48.38953	-104.2165	EEF	623
2004	483111005	KREMLIN	48.52334	-110.0845	EEF	606
2004	483711059	CHESTER	48.61689	-110.9901	EEF	618
2004	483810533	SOUTH OF FOUR BUTTES	48.63574	-105.5623	KRS	627
2004	484110750	AUSTIN COULEE	48.73489	-107.8632	KRS	708
2004	484211033	RUDYARD NE	48.71139	-110.5524	EEF	607
2004	484510434	PLENTYWOOD	48.76557	-104.5796	EEF	624
2004	484610629	OPHEIM	48.78055	-106.4877	EEF	625
2004	484710503	NAVAJO	48.79161	-105.0602	KRS	624
2004	485210632	COAL MINE CREEK EAST	48.87739	-106.5443	KRS	625

2004	485210710	GENEVIEVE	48.70875	-107.1810	KRS	709
2004	485210817	TURNER SE	48.87249	-108.2931	KRS	710
2004	485310951	CREEDMAN COULEE WEST	48.88615	-109.8538	EEF	620
2004	485610414	LONE TREE LAKE	48.94792	-104.2447	KRS	626

Preliminary habitat information was gathered at all 550 points that were visited in 2004. This data will be used to determine which habitats are adequately covered, as well as to begin looking at habitat distributions of various bird species.

- 45% of the points had sagebrush within 100 m
- 24% had grasslands within 100 m
- 10% had conifer woodlands within 100 m
- 47% had croplands or pasture within 100 m
- 3% had rural buildings within 100 m
- 18% had hardwood trees, riparian shrubs, or other wetland vegetation within 100 m
- 17% had standing or running water within 100 m

ASC detected 149 bird species during the surveys, but only 64 species were detected at more than ten points. These are listed in the following data summary, and the data for the individual points can be downloaded at: <http://biology.dbs.umt.edu/landbird/data/FWP2004.csv>. Of special note are Baird's Sparrow (43 points) and Sprague's Pipit (33 points), two species of high concern that occur mostly in northeastern Montana and are thus not detected on any of our other survey programs. Other species better covered by this sample included Chestnut-collared Longspur, Clay-colored Sparrow, and Savannah Sparrow.

Bird Species	Abundance	Points
American White Pelican	2	1
Double-crested Cormorant	5	1
Great Blue Heron	5	5
Turkey Vulture	4	5
Canada Goose	84	14
Gadwall	3	2
American Wigeon	6	2
Mallard	13	8
Blue-winged Teal	84	21
Cinnamon Teal	1	1
Northern Shoveler	4	2
Canvasback	5	2
Lesser Scaup	1	1
Ruddy Duck	2	1
Bald Eagle	1	1
Northern Harrier	41	37
Cooper's Hawk	1	1
Northern Goshawk	5	3
Swainson's Hawk	11	10
Red-tailed Hawk	17	12
Ferruginous Hawk	3	2
Golden Eagle	1	1
American Kestrel	18	14

Prairie Falcon	5	5
Gray Partridge	14	7
Ring-necked Pheasant	145	85
Ruffed Grouse	5	5
Greater Sage-Grouse	81	4
Sharp-tailed Grouse	2	1
Wild Turkey	1	1
Sora	6	4
American Coot	9	4
Sandhill Crane	10	5
Killdeer	122	72
Mountain Plover	18	4
American Avocet	1	1
Willet	28	22
Spotted Sandpiper	6	5
Upland Sandpiper	35	22
Long-billed Curlew	66	39
Marbled Godwit	22	19
Wilson's Snipe	51	38
Wilson's Phalarope	9	4
Franklin's Gull	57	6
Ring-billed Gull	43	21
Rock Dove	68	15
Mourning Dove	310	164
Great Horned Owl	2	2
Short-eared Owl	7	8
Common Nighthawk	14	13
Calliope Hummingbird	5	5
Belted Kingfisher	3	4
Red-headed Woodpecker	1	1
Red-naped Sapsucker	2	2
Downy Woodpecker	1	1
Northern Flicker	34	32
Western Wood-Pewee	16	12
Alder Flycatcher	1	1
Willow Flycatcher	2	2
Least Flycatcher	24	19
Hammond's Flycatcher	7	6
Dusky Flycatcher	9	8
Say's Phoebe	2	2
Western Kingbird	61	36
Eastern Kingbird	129	73
Loggerhead Shrike	10	8
Cassin's Vireo	4	4
Warbling Vireo	7	6
Red-eyed Vireo	1	1
Gray Jay	3	2
Steller's Jay	2	1
Clark's Nutcracker	12	9
Black-billed Magpie	100	56
American Crow	89	43
Common Raven	30	21
Horned Lark	948	278
Tree Swallow	51	20
Violet-green Swallow	22	11
N. Rough-winged Swallow	11	5
Bank Swallow	139	7

Cliff Swallow	162	32
Barn Swallow	37	18
Black-capped Chickadee	8	8
Mountain Chickadee	12	10
Red-breasted Nuthatch	12	12
Rock Wren	12	11
House Wren	63	49
Winter Wren	1	1
Marsh Wren	1	1
American Dipper	1	2
Golden-crowned Kinglet	5	3
Ruby-crowned Kinglet	30	19
Mountain Bluebird	53	29
Townsend's Solitaire	1	1
Veery	3	3
Swainson's Thrush	2	2
American Robin	187	109
Gray Catbird	50	39
Sage Thrasher	12	6
Brown Thrasher	7	7
European Starling	15	8
Sprague's Pipit	39	33
Cedar Waxwing	7	4
Yellow Warbler	164	94
Yellow-rumped Warbler	66	39
Townsend's Warbler	1	1
American Redstart	4	4
Northern Waterthrush	2	2
MacGillivray's Warbler	5	4
Common Yellowthroat	25	20
Wilson's Warbler	2	2
Yellow-breasted Chat	13	11
Western Tanager	8	7
Green-tailed Towhee	2	1
Spotted Towhee	42	29
Chipping Sparrow	108	52
Clay-colored Sparrow	58	41
Brewer's Sparrow	103	63
Field Sparrow	25	9
Vesper Sparrow	398	226
Lark Sparrow	178	91
Lark Bunting	485	143
Savannah Sparrow	197	111
Baird's Sparrow	67	43
Grasshopper Sparrow	57	41
Song Sparrow	40	33
Lincoln's Sparrow	12	8
White-crowned Sparrow	13	7
Dark-eyed Junco	37	19
McCown's Longspur	44	19
Chestnut-collared Longspur	178	57
Black-headed Grosbeak	3	2
Lazuli Bunting	27	18
Bobolink	43	29
Red-winged Blackbird	198	99
Western Meadowlark	1226	426
Yellow-headed Blackbird	9	7

Brewer's Blackbird	326	98
Common Grackle	7	6
Brown-headed Cowbird	549	213
Bullock's Oriole	17	15
Baltimore Oriole	2	2
Cassin's Finch	3	3
House Finch	5	1
Red Crossbill	25	6
Pine Siskin	47	11
American Goldfinch	33	17
Evening Grosbeak	2	1
House Sparrow	5	5

### **Variances**

None to report.

### **Expenditure Recap:**

Proposed:

	Federal Share		Match		Total
Direct Costs	55,000.00		21,825.00		71,825.00
Indirect @ 17.9%	10,475.00				10,475.00
Total	65,475.00	75.0%	21,825.00	25.0%	87,300.00

Actual:

	Federal Share		Match		Total
Direct Costs	54,617.53		21,600.00		76,217.53
Indirect	10,072.88				10,072.88
Total	64,690.41	75.0%	21,600.00	25.0%	86,290.41

Indirect costs were assessed at actual, approved rates (19.1% for FY03, 18.9% for FY04, and 17.87% for FY05). The non-federal share of funding was in the form of in-kind match from the University of Montana, of which \$9,825 is part of a donation from PPL Montana to the university and \$11,775 is waived overhead from the university.

### **Project Personnel**

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